

**REMARKS**

(1) **Summary of the Office Action**

Claims 1 – 31 were originally pending in the subject application. Claims 9, 10 and 21 were formerly withdrawn. By an office action mailed February 25, 2002 the Examiner allowed claims 23 – 28, indicated that, subject to a formal objection under 35 USC 112, claims 14 – 16 would be allowable if re-written in independent form. The remainder of the claims were rejected under 35 USC 112 or 35 USC112, or both. Claims 1, 15, 20, 22 and 29 are cancelled in this response.

(2) **This Response**

(a) **Allowance of Claims 23 – 28**

Claims 23 – 28 have been allowed.

(b) **Amendment of Claims 2 – 8, 11 – 14, 16 – 19 and 30**

In view of the allowance of independent claim 23, the applicant has amended claims 2 – 8, 11 – 14, 16 – 19 and 30 to depend from claim 23 with consequent amendments to give consistent language between the dependencies and claim 23.

(c) **Cancellation of Claims 1, 15, 20, 22, and 29**

The cancellation of claims 1, 15, 20, 22 and 29 is made with traverse and without prejudice to the applicant's right to continue prosecution of those claims by way of continuation or division such as may be appropriate.

(d) **Basis of Traverse**

In supporting the traverse of the Examiner's rejections of claims 1, 15, 20, 22 and 29, and all claims dependent therefrom, the applicant repeats all of the commentary of the response to office action of January 22, 2002.

In particular, amongst the grounds of traverse are that, in respect of claim 1, there has been no showing by the Examiner of an objective reference to support the statement that "The general concept of mounting a top truss assembly in a center beam rail road car at a height

greater than AAR Plate C falls within the range of common knowledge as part of routine design expediency during design optimization process [sic].”

The Examiner bears the burden of providing objective support for this statement. No such support has been provided. As such *prima facie* grounds for rejection under 35 USC 103 have not been established. In addition, in the response of January 22, 2002 the applicant provided a lengthy and reasoned statement explaining why it is not obvious to make a drop deck center beam car that exceeds AAR Plate C. The Examiner has not addressed the applicant’s argument.

The applicant expressly traverses the Examiner’s statements with respect to the “knowledge of persons skilled in the art”. No objective basis has been provided by the Examiner to support any of these statements. As such the rejections based upon then have not met the requirements of the law.

The applicant expressly traverses the rejections of claim 29, on the basis of a proposed combination of the Dominguez and Jamrozky references. There has been no showing of any suggestion, motivation, or incentive to combine the references as proposed. A showing of suggestion, motivation, or incentive is essential to establishing *prima facie* ground for rejection under 35 USC 103.

(3) **Claim Rejections - 35 U.S.C. 112 (2<sup>nd</sup> paragraph)**

(a) **AAR Plate ‘C’**

The Examiner has objected to the use of the “AAR plate C” designation used to identify the car profile, contending that the AAR plate C profile changes over time. The applicant respectfully disagrees with the examiner on this point for the following reasons.

First, the reference to AAR plate ‘C’ is claim language that has previously been allowed by the Commissioner in claim 14 of U.S. Patent 6,237,506. The applicant submits that claim language allowed in that case is also allowable in this case.

Second, the Examiner bears the onus of providing an objective source of support for the contention that AAR Plate C is subject to change over time. No such support has been provided. In that light, the applicant submits that the Examiner has not established grounds supporting this rejection of claim 1 or claim 30 under 35 USC 112.

As far as the applicant is aware, there does not seem ever to have been a change in plate 'C', or any of the other AAR plates. As far as the applicant is aware, the various plate designations are understood to be permanent.

Thirdly, notwithstanding this, even if the AAR plate C profile were to change from time to time as the Examiner suggests, the meaning of a patent claim is to be interpreted according to the state of the art or tests, standards or measurements established in the art as of the claim date: *Quantum Corporation v. Rodime PLC*, 851 F. Supp. 1382 ( "*the meaning which the inventor gives to his words can not be made to depend upon subsequent events, but should appear when the application is filed*"). Therefore, the meaning of the AAR plate C profile as defined on the claim date is fixed. Consequently, the applicant again submits that the Examiner has not established a ground of rejection under 35 USC 112 with respect to claim 1 or claim 30.

Fourth, the Examiner himself now asserts that: "The general concept of mounting a top truss assembly in a center beam railroad car at a height greater than AAR Plate C *falls within the range of common knowledge* as part of *obvious routine design* expediency during design optimization process. *It would have been obvious* to one of ordinary skill in the art at the time of the invention to modify Dominguez et al to include the use of a top truss assembly which is mounted at a height exceeding AAR plate C in order to increase the load carrying capability of the center beam car." (Emphasis added).

Clearly, it is contradictory for "AAR Plate C" to be "confusing" or "undefined" as alleged by the Examiner under 35 USC 112, and, simultaneously, to be "within the range of common knowledge", "obvious routine design" and "obvious to one of ordinary skill" under 35 USC 103.

The applicant has again enclosed a photocopy of AAR Plate 'C', taken from p.76 of the 1980 *Car and Locomotive Cyclopedia*, (Simmons-Boardman, Omaha, 1980) for the Examiner's convenience. Also enclosed for the Examiner's convenience is a copy of page 73 of the 1980 *Cyclopedia* indicating the 98 inch vertical limit on the center of gravity relative to top of rail.

The applicant submits the "AAR Plate C" is both clearly defined, and well known to persons skilled in the art. The applicant therefore requests that the rejection under 35 USC 112 be withdrawn.

(b) Claims 7 and 12: Top of Rail

In claim 7, the Examiner has objected to the phrase “when loaded with lumber having a density of up to 1740 lbs per 1000 board feet, has a center of gravity falling with a range whose upper limit is 98 inches above top of rail” on the basis that it is unclear as to which specific structure the applicant refers.

The Examiner has also objected that “the phrase “said end section interface lies at a height greater than 42 inches above top of rail” is confusing as it is unclear which particular rail structure applicant is referring to.”

The applicant submits that claims 7 and 12 were phrased correctly as filed. However, to make extra certain that there can be no doubt, the applicant has now capitalised “Top of Rail”.

The term “top of rail”, sometimes simply abbreviated as TOR, refers to the top of the rail road track. “Top of rail” is the universal datum for railcar vertical dimensions in North America, as indicated, for example, in AAR Plate ‘C’ as shown at p. 76 (and also in AAR plates B, E and F) of the *1980 Car and Locomotive Cyclopedia*, (Simmons-Boardman, Omaha, 1980) and in the center of gravity vertical height limit on p. 73, also as cited above. The *Cyclopedia*, in its various editions, is widely regarded as the pre-eminent rail road reference in North America.

The applicant submits that “Top of Rail” is a term fully understood by persons skilled in the art of North American rail road car design. This is demonstrated, for example, by use in the *Cyclopedia*. The applicant submits that, as such persons skilled in the art would have no difficulty in understanding the meaning of “top of rail”. See also *The Car and Locomotive Cyclopedia 1997* (Simmons-Boardman, Omaha, 1997) at pages 47 – 50, 52 – 54, 69, 81, 82, 87, 96, 105, 109, 110, 176 – 183, 195, 209, 213, 218, 274, 712 – 714, 726, 728, and 730.

Again, the Examiner has provided no objective basis of support for the rejection. The Examiner’s objection flies in the face of the demonstrable, objectively verifiable knowledge of persons skilled in the art, as shown in the 1980 and 1997 *Cyclopediae*. The applicant therefore respectfully requests withdrawal of any and all rejections related to the use of the term “top of rail”, “Top of Rail”, “top-of-rail”, or simply “TOR”.

(c) Claim 17

Claim 17 has been reworded as a dependency of claim 23. The wording has also been amended to clarify the relationship of the nominal loading height to the load limit height. The applicant submits that the language of the claim is now abundantly clear and unambiguous, and as such overcomes the rejection under 35 USC 112.

(4) **Conclusion**

Given that claim 23 has been allowed, all claims dependent from claim 23 are also allowable. The applicant therefore submits that all of the claims presently pending in the case are allowable and requests early and favourable disposition of this matter.

Respectfully submitted,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

2. (Amended) The center beam rail road car of claim [1] 23 wherein said body has a bunk defined between said deck structure and said top truss, said bunk having a loading height measured between said medial decking portion and said top truss that is at least 165 inches.
3. (Amended) The center beam rail road car of claim [1] 23, wherein:
  - [said car has a center sill, said deck structure being supported thereby;]
  - said web assembly includes an array of posts extending upwardly from said main sill and has an upper region adjacent to said top truss and a lower region adjacent to said decking structure;
  - said upper region of said web assembly has at least one longitudinally extending skirt against which lading can be placed.
4. (Amended) The center beam rail road car of claim [1] 23, wherein:
  - said car has a center sill, said deck structure being supported thereby;
  - said web assembly includes an array of posts extending upwardly from said [main] center sill and has a lower region adjacent to said decking structure and an upper region distant therefrom;
  - said car has an upper beam assembly, said upper beam assembly including said top truss and a beam stem, said top truss being mounted upon said beam stem and said beam stem being mounted to said upper region of said web assembly; and
  - said beam stem includes at least one longitudinally extending skirt against which lading can be placed.
5. (Amended) The center beam rail road car of claim [1] 23 wherein said medial decking portion lying between said two trucks is at least 28' - 0" long.
6. (Amended) The center beam rail road car of claim [1] 23 wherein said medial decking portion lying between said two trucks is at least 40' - 0" long.
7. (Twice Amended) The center beam rail road car of claim 2 wherein, when loaded with lumber having a density of up to 1740 lbs. per 1000 board feet, said center beam rail road car has a center of gravity falling within a range whose upper limit is 98 inches above [top of rail] Top of Rail.

8. (Amended) The center beam car of claim [1] 23 wherein said end decking portions and said medial decking portion each have a load bearing interface, and the load bearing interface of said end decking portions is stepped upwardly relative to the load bearing interface of said medial decking portion a distance of at least 30 inches.
11. (Amended) The center beam rail road car of claim [1] 23 wherein:  
said rail road car has a pair of side sills extending along said deck structure;  
said side sills each have a medial side sill portion mounted to said medial decking portion, said medial side sill portion having a first depth of section;  
said side sills each have end side sill portions mounted to said end decking structures, said end side sill portions having a second depth of section; and  
said first depth of section is less than said second depth of section.
12. (Amended) The center beam rail road car of claim [1] 23 wherein:  
said end decking portions include lading support structure mounted thereon defining an end section lading interface; and said end section lading interface lies at a height greater than 42 inches above [top of rail] Top of Rail.
13. (Amended) The center beam rail road car of claim [1] 23 wherein:  
said rail road car has a pair of side sills extending along said deck structure;  
said side sills each have a medial side sill portion mounted to said medial decking portion, said medial side sill portion having a first depth of section;  
said side sills each have end side sill portions mounted to said end decking structures, said end side sill portions having a second depth of section; and  
said first depth of section is less than said second depth of section.
14. (Amended) The center beam rail road car of claim [1] 23, wherein:  
said car has a pair of side sills extending along said deck structure;  
said side sills each have a side sill medial portion mounted to said medial decking portion, said medial side sill portion having a first depth of section;  
said side sills each have side sill end portions mounted to said end decking structures, said end side sill portions having a second depth of section;  
each of said side sills has a knee joining said side sill medial portion to each of said side sill end portions;  
each said knee has a longitudinally inboard flange, a longitudinally outboard flange, and webbing extending therebetween;  
said longitudinally outboard flange has a lower extremity and an upper extremity; and

said lower extremity lies at a longitudinally inboard station relative to said upper extremity.

16. (Amended) The center beam rail road car of claim [15] 23 wherein said medial decking portion has at least one lading securement apparatus mounted to said medial portion side sill web.

17. (Twice Amended) [A] The center beam rail road car [having a longitudinal centerline and a pair of ends, the rail road car being supported by rail car trucks at either end thereof, said rail road car comprising:] of claim 23, wherein:

[a cargo support structure borne between the trucks, upon which cargo can be carried, said cargo support structure including a pair of first and second end structures each mounted over a respective one of said trucks, and a medial structure mounted between said trucks, said medial structure being stepped downwardly relative to said end structures;

a web assembly including an array of spaced apart posts mounted at intervals along the longitudinal centerline of the rail road car, said array extending upwardly of said cargo support structure;

an upper beam assembly surmounting said web assembly;]

said rail road [railroad] car [having] has a first height, said first height being a load limit height [defined as the vertical distance] measured upwardly from [between] said medial [structure] decking portion [and said upper beam] to said top truss assembly,

said rail road car has a second height measured upwardly from said medial decking portion, said second height being [and having] a nominal load height, said second height being [that is at least as great as] the largest integer multiple of 33 inches that is less than [the load limit] said first height; and

said web assembly [having] has at least one skirt member against which loads placed laterally outward thereof can bear, said skirt member extending between a [first] third height and a [second] fourth height, said third and fourth heights straddling said [nominal load] second height.

18. (Amended) The center beam rail road car of claim 17 wherein the web assembly includes an array of spaced apart posts mounted at intervals along the longitudinal centerline of the rail road car, said array extends upwardly of said deck structure, and said skirt extends a longitudinal distance corresponding to at least one of said intervals.



19. (Amended) The center beam rail road car of claim 18 wherein said third [first] height is at least as great as said [load limit] first height, and said [second] fourth height is at least 6 inches below said [nominal load] second height.

30. (Amended) [A] The center beam rail road car [comprising:] of claim 23 wherein  
[a center beam car body mounted on a pair of first and second spaced apart rail car trucks, said body having  
a center sill;  
a deck structure extending outboard of said center sill,  
a vertical web assembly running along said car, said vertical web assembly extending upwardly of said center sill structure, and  
a top truss assembly surmounting said vertical web assembly,] said top truss [lying] is mounted at a height exceeding AAR Plate C[;  
said deck structure including first and second end decking portions mounted over said respective first and second trucks, and a medial decking portion lying between said trucks, said medial decking portion being stepped downward relative to said first and second end decking portions; and  
at least one of said end decking portions having a cargo support interface lying at a level greater than 42 inches above top of rail].